Happy Campers at the 2018 Rock Springs 4-H Camp!

Staff:
Rickey Roberts, Ag & 4-H Agent  
rr roberts@ksu.edu
Tristen Cope, FCS & 4-H Agent  
t cope@ksu.edu
Myrta Billings, Nutrition Educator  
billimyr@ksu.edu
Jana Miller, Office Professional  
jana8@ksu.edu

Office Information:
202 S. 3rd, Suite A, Marion
Phone: 620-382-2325
Fax: 620-382-5660
www.marion.ksu.edu
Management Options for Stressed Corn: Ignacio Ciampitti & Stu Duncan

High temperatures can cause problems in corn even when soil moisture is adequate—and will compound problems in drought-stressed corn. Hot, dry conditions are particularly damaging during pollination (VT-tassel through R1-silk). Much of the corn crop in Kansas is just now entering this critical period for determining grain yield. While many areas of Kansas received much needed rainfall recently, extreme temperatures are returning this week and drought conditions are still present in many locations.

Effects of stress at pollination time
There are several reasons why the four weeks centered around pollination are so critical for determining grain yield. During the last couple of weeks before tassels emerge, the potential ear length is being determined. Extreme stress at this time can reduce the number of kernels per row—affecting potential ear size. Extremely high temperatures prior to and during pollen shed can reduce pollen viability.

Drought stress can slow silk elongation so much that the pollen may be shed before the silks emerge. Lack of water can also result in poor tassel exertion. Combined with the leaf rolling associated with drought stress, the pollen may be shed before the tassel has emerged. Even if pollination does occur successfully, kernels may abort during the first several days of development under severe heat/drought stress. All of these factors can reduce successful pollination, kernel set, and kernel development, reducing the number of kernels per acre—the greatest determinant of grain yield.

Management options for stressed corn
Where dryland corn has been under severe drought stress, you’ll have to decide whether to let it go and hope for some kind of grain yield, salvage the crop for silage or hay, or leave the crop in the field for its residue value. It likely will pay to wait until after pollination is complete before making this decision to get some idea of kernel set. If kernel set is good, the ears at least have the potential to produce grain. If kernel set is severely reduced, the first step is to estimate potential grain yield based on kernel numbers per acre and average to slightly below average kernel size. This can help you make the grain vs. forage decision.

Economically, should you leave the corn, cut it for silage or hay, or leave it for residue?
The value of the residue for moisture retention, soil quality, and future crop productivity will vary depending on the situation, and can be hard to quantify— but it is considerable. As for the silage/hay vs. grain decision, if the yield potential is less than 25 bushels per acre, it’s probably best to cut it for silage or hay.
If the yield potential is 50 bushels or more, it’s probably best to harvest it for grain. If the yield potential is between 25 and 50, the decision will depend on the price of corn, the quality of the silage, and on a producer’s ability to use or sell the silage.

Of the two options for dryland corn that has limited yield potential – silage or hay -- silage is normally the preferred option. However, you need the facilities to make silage (or sell it to someone who does), and there must be enough moisture in the plants to properly ensile. Where there’s no ear at all, silage may not be a good option. Where the ear is very small, or has poor seed set, the silage will have lower energy value and lower overall forage quality than normal. Even at normal yield levels, silage quality begins to decline when grain yield drops below roughly 150 bushels/acre, and continues to decrease as grain yields keep going down.

To cut corn for silage, you need 65-75% moisture in the plant. If plants are suffering from drought, they may have lost some of the bottom leaves. The top leaves may have browned off or turned white. In that case, the plants probably do not have 65% moisture, depending on how much moisture is in the stalk. Where that’s the case, your only option is probably to chop and graze, or hay the crop like a summer annual forage. The pasture/hay shortage that exists in some areas of the state may make haying the failing corn crop a more desirable option this year.

When chopping or cutting for hay, stalks should be cut at least 6-8 inches off the ground to avoid nitrate toxicity that may result when feeding forage made from drought-stressed corn. Under drought conditions, the plant does not grow normally and high levels of nitrate can accumulate, especially in the lower portions of the stalk. You should also have corn hay (or stubble if you plan to graze) tested for nitrates. A forage nitrate test costs only $5-15 and it’s the only sure way to make sure the hay is okay to feed to cattle. Ensiling the corn, if possible, is preferred to chopping or grazing because of that potential for nitrate toxicity.

If you plan to have cattle graze the corn field after it has been chopped or cut for hay or silage, watch for any shattercane or Johnsongrass that comes up after a rain. New regrowth from these sorghum-type plants after a drought can be dangerously high in prussic acid.

How much silage can producers get from drought-stressed corn?
A publication from the University of Wisconsin estimates that for corn that has been stressed, with limited grain yield potential, producers can expect about one ton of silage per acre for every five bushels of grain yield. For corn that is not stressed, producers can get about one ton of silage for each six to seven bushels of grain yield. If little or no grain is expected, a very, very rough pre-harvest estimate of yield can be made by assuming that one ton of silage can be obtained for each foot of plant height, excluding the tassel.

Video of the Month: How Often to Water Lawns
http://kansashealthyyards.org/all-videos/video/how-often-to-water-lawns
Marion Community Garden

Harvesting at the Marion Community Garden is now in full swing! Weekly donations of fresh produce including: salad bundles, beets, onions, lettuce, peppers, cabbage, and herbs are being taken to the Marion County Food Bank.

If you are interested in helping at the Community Garden, please contact Extension Agent, Tristen Cope today at 620-382-2325 or stop by the Office!

Marion County Farmer’s Markets

Doyle Valley Farmer’s Market Downtown Peabody
Mondays from 4 p.m. – 6:30 p.m.

Florence Farmer’s Market at Moses Shane Park in Florence
Tuesdays from 5:00 – 7:0 p.m.

Hillsboro Farmer’s Market at Memorial Park in Hillsboro
Thursdays from 5 – 7 p.m.

Marion Farm & Art Market at Brooker Central Park in Marion
Wednesdays from 5 - 6:30 p.m.

Burns Farmer’s Market at Corner of Washington and Broadway
Friday Evenings
Nutrition Facts Label Changes

The Food and Drug Administration is updating the Nutrition Facts label and changes will be required starting Jan. 1, 2020. The updates include:

- Added sugars will have a separate line directly under “Total Sugars.”
- Serving sizes are based on what people actually eat at one time. These figures are being updated for the first time since 1993.
- Calories will be more noticeable in bigger and bolder font, you can’t miss them.
- Updated Daily Values reflects how much of the nutrient is needed in a 2,000-calorie diet. Five percent is considered low, 20 percent is considered high.

The More You Know

If you eat foods with hot peppers, you likely know the spiciness or heat, can vary quite a bit.

The heat comes from a group of compounds called capsaicinoids, including the well known capsaicin. This fiery compound causes “chemesthesis” in which the receptors inside the mouth react to pain, touch, and heat. Some may call it pain, others call it pleasure.

Chile pepper varieties have a varying amount of heat and can also be quite different within the same variety. Growing conditions will also determine heat in peppers. If the plant is stressed, the peppers will produce more capsaicin.

The pith, or white membrane, contains a majority of the heat from capsaicin. Simply cut out the pith, as well as the seeds, to cool down the heat. Save these to add back to a recipe if more heat is desired. The size of pepper makes little difference in heat pungency.

Information Derived From: The Science of Good Cooking, Cook’s Illustrated
County Fair Highlights
A full schedule can be found on our website:
http://www.marion.k-state.edu/marioncountyfair/index.html

July 21 — AM Dog Show
July 22 — PM Horse Show
July 23 — AM Clothing Judging
  — PM Foods Judging & Sale
  — PM Public Style Revue
July 24 — Livestock & 4-H Exhibit Check In
July 25 — ALL DAY 4-H Building Exhibit Judging
  — PM Parade
  — PM Presentation of Commissioners Cookie Jar
  — PM Swine Show
July 26 — AM Rabbit/Poultry Judging
  — AM Sheep/Meat Goat Show
  — PM Animal Science Quiz Bowl
  — PM Bucket Calf/Beef Show
July 27 — AM Dairy Goat/Dairy Cow Show
  — AM Photography Judging Contest
  — PM Round Robin
  — PM Friends of 4-H Dinner/Project Auction

4-H Livestock Sale Procedures
1. 4-Hers enrolled in a market animal project may sell one of the following market species shown at the fair: 1 steer, 1 lamb, 1 hog, 1 market goat. (through the premium auction). Other animals may be sold at floor prices.
2. 4-Hers must notify the 4-H Fair Office 8:00 pm on Thursday, July 26, of animals to be sold at auction or base bid. If no notification is received, we are to believe the animals will be taken home.
3. Livestock premium sale animals or base bid animals must have a minimum weight of:
   - Beef—1,050 lbs., Lambs—100 lbs., Swine—225 lbs.
4. A sale fee will be held out of your check to cover sale expenses.
5. We will try to receive a base bid for the sheep, goats, and hogs. Please remember that this is becoming increasingly difficult each year. There may be a trucking fee depending on who receives the bid.

County Fair Entries
All County Fair Projects must be pre-entered on our Fair Entry site by July 11. NO late entries will be accepted!

Reminder for Livestock Exhibitors! A nomination does not constitute an entry. All animals (market and breeding) must be entered online at:
http://www.asi.k-state.edu/research-and-extension/youth-programs/stateshows.html

State Fair entry is due July 15!
KJLS entry is due August 15!
The Marion County 4-H Style Revue Committee hosted its first Multi-County Style Revue Workshop in preparation for the 2018 Marion County Fair!

The participants learned principles of style and design, how to fill out a cost per wear form, wrote their own script, focused on polishing their look, worked on their walk, and heard advice from a judge. We wrapped up the evening by taking all that we had learned, and held a mini Style Revue!

Interested in learning more about the Style Revue? Come check out the Public Style Revue during the County Fair on Monday, July 23rd at 7:00 PM at the Hillsboro United Methodist Church.

Check out our website for even more events and details!
http://www.marion.k-state.edu/4-h/4HUpdate.html
Upcoming Events

July 9—ServSafe Class
July 12-14—Tri County Free Fair
July 15—State Fair Livestock Entry Due
July 21-28—Marion County Fair
August 15—KJLS Entry Due